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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,584	02/04/2002	Mika Raitola	4925-187PUS	8338

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EXAMINER	
MAIS, MARK A	
ART UNIT	**PAPER NUMBER**
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/018,584	RAITOLA, MIKA	
	Examiner	Art Unit	
	Mark A. Mais	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7-13,16-21,24-26,29-31,34-36,39-41,44-46 and 49-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 7-13, 16-21, 24-26, 29-31, 34-36, 39-41, 44-46, and 49-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 51 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter (e.g., "computer-readable medium being encoded with a computer program"). In the claimed invention, there is no practical application resulting in a transformation to a different state (i.e., there is no computer processor/element performing the encoded instructions to transform the functional computer instructions into useful, concrete, and/or tangible results). For examination purposes, the examiner will interpret the claim as a computer processor/element executing a computer program code stored on a computer readable medium. Correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-3, 7-12, 16-21, 24-26, 29-31, 34-36, 39-41, 44-46, and 49-51 are rejected under 35 U.S.C. 102(e) as being anticipated by Kitagawa et al. (USP 6,603,980).

5. With regard to claim 1-3, Kitagawa et al. discloses a method comprising:

controlling a power used for transmitting data between a terminal device and a transceiver device of a communication system **[See Abstract],**

monitoring the power used in a transmission between said terminal device and said transceiver device **[Fig. 2, col. 4, lines 8-12]** *during each of predetermined time units* **[Figs. 9 and 10; monitoring is accomplished over a time period (the frames are interpreted as**

spanning timeslots, col. 4, lines 1-2) whether in regular mode or compressed mode, col. 7, line 58 to col. 8, line 1; accomplished by determining section 110, col. 4, lines 15-23],

requesting an increase or a decrease of the power used in the transmission by using a specific information element for each *of the* predetermined time units **[Fig. 2, TPC bit generating section 109, col. 4, lines 12-14]**,

storing a predetermined number *of the values* of said specific information elements *of a plurality of subsequent time units* **[Fig. 2, Accumulating section 113, col. 4, lines 24-33; it is inherent that the memory is finite and that these values are stored over a finite period of time]**,

calculating a *power raise* **[TPC bit value of either 0 or 1, col. 4, lines 18-20]** *requested for the power used in the transmission by summing the* predetermined number *of the values of the* specific information elements **[Fig. 2, Determining section 110 calculates the increase/decrease power TPC bit and the amplitude of the TPC bit in the reception signal, col. 4, lines 15-23]**, and

calculating an average received power of transmission during the plurality of subsequent time units by using stored values of the specific information elements **[Examiner interprets the average power as that calculated arbitrarily over a period of time, for example, col. 10, lines 36-50; col. 12, lines 39-44]** ;

determining whether the calculated power raise is greater than a sum of the calculated average power of transmission and a predetermined level **[the increase/decrease power TPC bit value is multiplied by the correction value, col. 4, lines 50-59; an offset value is added to the transmit power value, col. 11, lines 51-55; See Also, col. 12, lines 14-27 for an**

explanation as to how the combined values are used to used to determine/decide what the value is]; inhibiting an increase of the power used in the transmission even if the increase is requested if the determination is positive; and allowing an increase of the power used in the transmission when the increase is requested if the determination is negative **[TPC generating section determines what value TPC bit inhibits/allows (interpreted as increase/decrease) the transmit power TPC bit value, col. 5, lines 37-42; col. 6, lines 35-42]**.

6. With regard to claim 7 and 19-21, Kitagawa et al. discloses that the method is performed by at least one of said terminal device and said transceiver station **[col. 13, lines 52-54]**.

7. With regard to claims 8-9, 24-26, and 29-31, Kitagawa et al. discloses that the method is performed in downlink/uplink direction **[col. 13, lines 52-54]**.

8. With regard to claim 10-12, Kitagawa et al. discloses a device comprising:

controlling means for controlling a power used for transmitting data between a terminal device and a transceiver device of a communication system **[See Abstract]**

monitoring means for monitoring during *each of* predetermined time units **[Figs. 9 and 10; monitoring is accomplished over a time period (the frames are interpreted as spanning timeslots, col. 4, lines 1-2) whether in regular mode or compressed mode, col. 7, line 58 to col. 8, line 1; accomplished by determining section 110, col. 4, lines 15-23]** the power used in a transmission between said terminal device and said transceiver device **[Fig. 2, col. 4, lines 8-12]**,

requesting means for requesting an increase or a decrease of the power used in the transmission by using a specific information element for each *of the* predetermined time units **[Fig. 2, TPC bit generating section 109, col. 4, lines 12-14]**,

storing means for storing a predetermined number of *values of the* specific information elements *of a plurality of subsequent time units* **[Fig. 2, Accumulating section 113, col. 4, lines 24-33, it is inherent that the memory is finite and that these values are stored over a finite period of time]**,

calculating means for calculating *a power raise* **[TPC bit value of either 0 or 1, col. 4,** lines 18-20] *requested for the power used in the transmission by summing the* predetermined number *of the values of the* specific information elements **[Fig. 2, Determining section 110 calculates the increase/decrease power TPC bit and the amplitude of the TPC bit in the reception signal, col. 4, lines 15-23]**,

calculating means for calculating an average received power of transmission during the plurality of subsequent time units by using stored values of the specific information elements **[Examiner interprets the average power as that calculated arbitrarily over a period of time, for example, col. 10, lines 36-50; col. 12, lines 39-44]**;

determining means for determining whether the calculated power raise is greater than a sum of the calculated average power of transmission and a predetermined level **[the increase/decrease power TPC bit value is multiplied by the correction value, col. 4, lines 50-59; an offset value is added to the transmit power value, col. 11, lines 51-55; *See Also*, col. 12, lines 14-27 for an explanation as to how the combined values are used to used to determine/decide what the value is]**;

an output means for outputting a signal configured to one of: inhibit an increase of the power used in the transmission even if the increase is requested if the determination is positive; and allow an increase of the power used in the transmission when the increase is requested if the determination is negative **[TPC generating section determines what value TPC bit inhibits/allows (interpreted as increase/decrease) the transmit power TPC bit value, col. 5, lines 37-42; col. 6, lines 35-42]**.

9. With regard to claim 16 and 34-36, Kitagawa et al. discloses that the method is performed by at least one of said terminal device and said transceiver station **[col. 13, lines 52-54]**.

10. With regard to claims 17-18, 39-41, and 44-46, Kitagawa et al. discloses that the method is performed in downlink/uplink direction **[col. 13, lines 52-54]**.

11. With regard to claims 49-51, Kitagawa et al. discloses a base station, terminal device **[col. 13, lines 52-54, interpreted as being performed by either]** and computer processor/element executing a computer program code stored on a computer readable medium comprising:

a control unit for controlling a power used for transmitting data between a terminal device of a communication system **[See Abstract]**;

a monitoring unit for monitoring the power used in a transmission between said terminal device and said transceiver device **[Fig. 2, col. 4, lines 8-12]** during each of predetermined time units **[Figs. 9 and 10; monitoring is accomplished over a time period (the frames are interpreted as spanning timeslots, col. 4, lines 1-2) whether in regular mode or**

compressed mode, col. 7, line 58 to col. 8, line 1; accomplished by determining section 110, col. 4, lines 15-23];

a request unit for requesting an increase or a decrease of the power used in the transmission by using a specific information element for each of the predetermined time units **[Fig. 2, TPC bit generating section 109, col. 4, lines 12-14]**;

a storage unit for storing a predetermined number of values of the specific information elements of a plurality of subsequent time units **[Fig. 2, Accumulating section 113, col. 4, lines 24-33, it is inherent that the memory is finite and that these values are stored over a finite period of time]**;

a first calculating unit for calculating a power raise **[TPC bit value of either 0 or 1, col. 4, lines 18-20]** requested for the power used in the transmission by summing the predetermined number of the values of the specific information elements **[Fig. 2, Determining section 110 calculates the increase/decrease power TPC bit and the amplitude of the TPC bit in the reception signal, col. 4, lines 15-23]**;

a second calculating unit for calculating an average received power of transmission during the plurality of subsequent time units by using stored values of the specific information elements **[Examiner interprets the average power as that calculated arbitrarily over a period of time, for example, col. 10, lines 36-50; col. 12, lines 39-44]**;

a determining unit for determining whether the calculated power raise is greater than a sum of the calculated average power of transmission and a predetermined level **[the increase/decrease power TPC bit value is multiplied by the correction value, col. 4, lines 50-59; an offset value is added to the transmit power value, col. 11, lines 51-55; *See***

Also, **col. 12, lines 14-27 for an explanation as to how the combined values are used to used to determine/decide what the value is**]; and

an output unit for outputting a signal configured to one of inhibit an increase of the power used in the transmission even if an increase is requested if the determination is positive and allow an increase of the power used in the transmission when the increase is requested if the determination is negative **[TPC generating section determines what value TPC bit inhibits/allows (interpreted as increase/decrease) the transmit power TPC bit value, col. 5,** lines 37-42; **col. 6, lines 35-42]**.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitagawa et al. as applied to claims 1-3, 7-12, 16-21, 24-26, 29-31, 34-36, 39-41, 44-46, and 49-51 above.

14. With regard to claims 4 and 13, Kitagawa et al. does not specifically disclose that *a value* of each one of said specific information elements (TPC) used in each predetermined time unit is *one of* -1 indicating a request for a decrease of power *and* +1 indicating a request for an increase of power. However, as noted above, Kitagawa et al uses a binary format and asserts a value on the TPC bits as either a 1 or 0. Using different binary formats are well known to those of ordinary skill in the art. Moreover, Applicant has not indicated whether using a non-return to zero format provides any difference to the invention, as claimed. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a [+1, –1] format as opposed to a [1, 0] format.

Response to Arguments

15. Applicant's arguments filed September 21, 2006 have been fully considered but they are not persuasive.

16. With respect to claim 1, Applicants argue that Kitagawa et al. fails to disclose storing and processing TPC bits corresponding to predetermined time units **[Applicant's Amendment dated September 21, 2006, page 14, lines 36-37]**. The examiner respectfully disagrees.

17. As noted for the rejection of independent claim 1, Kitagawa et al. discloses that storing the values in accumulating section 113 **[Fig. 2, col. 4, lines 24-33]**. Furthermore, it is inherent that this finite memory stores these values over a finite period of time.

18. With respect to claim 1, Applicants argue that Kitagawa et al. fails to disclose a power increase is inhibited even if the increase requested is positive or a power increase if the increase requested is negative **[Applicant's Amendment dated September 21, 2006, page 15, lines 11-14]**. The examiner respectfully disagrees.

19. As noted for the rejection of independent claim 1, Kitagawa et al. discloses that the TPC generating section determines what value TPC bit inhibits/allows (interpreted as increase/decrease) the transmit power TPC bit value **[col. 5, lines 37-42; col. 6, lines 35-42]**. Kitagawa et al. inhibits a power increase by lowering the amplitude of the transmitted TPC bit value of 1 [positive value]. Kitagawa et al. also allows a power increase by lowering the amplitude of the transmitted TPC bit value of 0 [maintaining current power levels]. For example, if the power levels were too high, Kitagawa et al. could use 10 cycles of TPC bits (i.e., 10 TPC bits) to decrease power by a transmitted TPC value of 0. Then, when the power was at the correct level, it would send a TPC value of 0 [negative value], but decrease the amplitude of the TPC bit [i.e., maintain current power level], thereby causing a *relative* increase in transmitted power.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(a) Wang et al. (USP 6,856,644), Method and apparatus for forward link power bit generation in a spread spectrum communication system.

(b) Komatsu (USP 6,804,531), Closed loop power control with adjustable width based on channel quality.

(c) Bae (USP 6,697,635), Method and apparatus for forward and reverse power control in mobile telecommunication system.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Mais whose telephone number is 572-272-3138. The examiner can normally be reached on M-Th 5am-4pm.

22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAM
December 16, 2006

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